

Evaluation report for GKM result table, submitted on 09/09/2015.

This table summarizes sample results for 23 metals (Hg data was not included) collected from 4 critical locations during different periods of time. Each location's data is described and evaluated below and is verifiable in the attached maps captures.

1. Cement Creek immediately upstream of Red and Bonita confluence (CC03B)

Surface water samples were collected bi-weekly and analyzed for 23 total and dissolved metals. ***The reported concentrations were compared to the health-based screening levels for a 64-day recreational exposure concentrations (RBC) for developed by Region 8 for this incident. All dissolved and total metal concentrations are below the recreational screening levels.***

Results for Al, As, Ba, Cd, Ca, Co, Cu, Fe, Pb, Mg, Ni, K, Na, V and Zn were in trend of slight increase; results for the rest of analyzed metals were the same and one result for Co (collected on 09/03/2015) was questionable, because dissolve concentration was higher than total.

2. Gold King Mine Adit (GKMSW09 and CC06) - (Sampling location's ID was changed from GKMSW09 to CC06 on 08/18/2015 to correlated with historical data location ID, but it is the same sampling location)

Surface water samples were collected over 24 days: every other day from 08/10/15 till 08/26/15 and then on 08/31/2015 and 09/03/2015 and analyzed for 23 total and dissolved metals. ***The reported concentrations were compared to the health-based screening levels for a 64-day recreational exposure concentrations developed by Region 8 for this incident.***

The following represents the compared results:

- All reported dissolved **Arsenic** concentrations were below RBC level except for 08/13/15 result that **exceeded RBC about 2.5 times.**
- All reported total and dissolved **Cobalt** concentrations were **about twice higher than RBS for Co and remain about the same during monitoring period.**
- All total and dissolved **Copper** concentrations were below RBC level except for 08/17/2015/and 09/03/2015, when they were slightly elevated for both, total and dissolved results **(1.5 % higher than RBC for Cu).**
- Dissolved **Iron** results **were higher than RBC** for the following dates: 08/13/2015, 08/15/2015 and 08/22/2015. The rest of the **Fe** data were lower than RBC for Iron.
- All total and dissolved **Manganese** results **were 4 - 4.5 times higher than RBC for Mn** during all monitoring period.

Dissolved results for the following metals: AL, Sb, Ba, Be, Cd, Cr, Pb, Mo, Ag, Na, Tl and V - were all below RBCs and demonstrating decrease or non-detect trend.

And results for Ca, Mg, Ni, K, Se and Zn were below RBCs with about the same concentrations during monitoring period.

3. RB treatment pond effluent

5 Surface Water samples were collected during two weeks period and were analyzed for 23 total and dissolved metals. ***The reported concentrations were compared to the health-based screening levels for a 64-day recreational exposure concentrations developed by Region 8 for this incident.***

The following represents the compared results:

- All reported **Manganese** concentrations (total and dissolved) were **exceeding RBC - 4 times.**
- All reported **Cobalt** concentrations (total and dissolved) were **about twice higher than RBC for Co and remain about the same during monitoring period.**
- **Calcium** concentrations demonstrated **increase** during monitoring period.
- Dissolved results for the following metals: AL, Be, Cd, Cu, Fe, Pb, Mg, Ni, K, Na and TI were below RBCs and demonstrated concentrations decrease.
- Dissolved results for Sb, As, Ba, Cr, Mo, Se, Ag, V and Zn were about the same during monitoring and were below RBCs.
- **Total** concentration results for Ba, Be and Cd on 08/22/2015, Ca on 08/21/2015, Na on 08/26/2015, Se on 08/31/2015 and Ni and Zn results on 09/03/2015 **were lower than respectful dissolved concentrations.**

4. Cement Creek upstream of Silverton (CC48)

32 surface Water samples were collected from 08/05/15 till 09/03/15 and were analyzed for 23 total and dissolved metals. ***The reported concentrations were compared to the health-based screening levels for a 64-day recreational exposure concentrations developed by Region 8 for this incident.***

- ***No increasing concentration trend was observed during monitoring period for any metal.***
- Dissolved results for Ca, As, Fe, Mg, Mn, Ni, K, Na, V and Zn were about the same during monitoring and were below RBCs.
- Dissolved results for Sb, Cr, Mo, Se, and Ag were non-detected /below MDLs during monitoring and were below RBCs.
- Dissolved results for Al, Be, Ba, CD, Co, Cu, Pb and Zn demonstrated decreasing trend and were below RBCs.
- **Total** concentration results for Al, As, Ba, Ca, Cd, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Na, TI, V and Zn **were lower than respectful dissolved concentrations in many samples throughout monitoring period.**